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*Ch*

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/189,415 11/10/98 FINLAY

B 07422/013001

EXAMINER
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HM12/0627

SEED INTELLECTUAL PROPERTY LAW GROUP PLL  
701 FIFTH AVENUE  
SUITE 6300  
SEATTLE WA 98104

ART UNIT	PAPER NUMBER
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1645

*20*

DATE MAILED:

06/27/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
COMMISSIONER OF PATENTS AND TRADEMARKS


Washington, D.C. 20231

Jeffrey Pepe  
701 Fifth Avenue, Suite 6300  
Seattle, Washington 98104-7092

- 1) A copy of the Office Communication that was mailed to Applicants on 28 July 2000 (paper no. 15) is being provided in response to the Applicants' request for a copy of the missing Office Communication mailed 28 July 2000 (paper no. 19).
- 2) Any inquiry concerning this communication or earlier communications from the Examiner should be directed to S. Devi, Ph.D., whose telephone number is (703) 308-9347. The Examiner can normally be reached on Monday to Friday from 7.15 a.m to 4.15 p.m. except one day each bi-week, which would be disclosed on the Examiner's voice mail system.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lynette Smith, can be reached on (703) 308-3909. The fax phone number for this Group is (703) 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

  
S. Devi, Ph.D.  
Patent Examiner  
June 2001



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/189,415 11/10/98 FINLAY B 07422/013001

HM12/0728

LISA A HAILE  
FISH & RICHARDSON  
4225 EXECUTIVE SQUARE  
SUITE 1400  
LA JOLLA CA 92037

EXAMINER

DEVI, S

ART UNIT

PAPER NUMBER

1645

DATE MAILED:

07/28/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
09/185,415	11/10/998	Finlay et al.	07422/013001

EXAMINER	
S. Devi, Ph.D	
ART UNIT	PAPER NUMBER
1645	15

DATE MAILED:

Please find below a communication from the EXAMINER in charge of this application

Commissioner of Patents

1) This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 C.F.R 1.821(a)(1) and (a)(2). A computer readable form (CRF) of the sequence listing was submitted. However, the CRF could not be processed by the Scientific and Technical Information Center (STIC) for the reason(s) set forth on the attached CRF Diskette Problem Report.

2) Applicant is given ONE MONTH, or THIRTY DAYS, whichever is longer, from the mailing date of this letter within which to comply with the sequence rules, 37 C.F.R 1.821 - 1.825. Failure to comply with these requirements will result in ABANDONMENT of the application under 37 C.F.R 1.821(g). Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 C.F.R 1.136(a). In no case may an applicant extend the period for reply beyond the SIX MONTH statutory period. Direct the reply to the undersigned. Applicant is requested to return a copy of the attached CRF Diskette Problem Report with the reply.

3) Any inquiry concerning this communication or earlier communications from the Examiner should be directed to S. Devi, Ph.D., whose telephone number is (703) 308-9347. The Examiner can normally be reached on Monday-Friday from 8:00 a.m. to 4:30 p.m. (Eastern Time).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lynette Smith, can be reached at (703)308-3909. The FAX phone number for group 1600 is (703)308-4242.

An inquiry of a general nature or relating to the status of the application should be directed to the group receptionist whose telephone number is (703)308-0196.

S.D  
S. Devi  
July 2000

# **NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES**

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

- ☐ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to these regulations, published at 1114 OG 29, May 15, 1990 and at 55 FR 18230, May 1, 1990.
- ☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).
- ☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).
- ☒ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.821 and/or 1.823, as indicated on the attached copy of the marked-up "Raw Sequence Listing".
- ☐ 5. The computer readable form that has been filed with this application has been found to be illegible and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).
- ☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable form "Sequence Listing" as required by 37 C.F.R. 1.821(e).
- ☐ 7. Other: \_\_\_\_\_

## **Applicant Must Provide:**

- ☒ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- ☒ An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directed into the specification.
- ☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (703) 308-4216

For CRF Submission Help, call (703) 308-4212

PatentIn Software Program Support (SIRA)

Technical Assistance.....703-287-0200

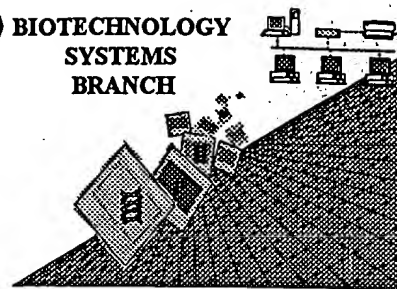
To Purchase PatentIn Software.....703-308-2600

**PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR RESPONSE**

V. Ryan

# **RAW SEQUENCE LISTING** **ERROR REPORT**

BIOTECHNOLOGY  
SYSTEMS  
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following CRF diskette:

Application Serial Number:

09/189415

Art Unit / Team No. :

1641

Date Processed by STIC:

3/10/2000

RECEIVED  
MAR 27 2000  
TC 1600 MAIL ROOM

**THE ATTACHED PRINTOUT EXPLAINS THE ERRORS DETECTED.**

**PLEASE BE SURE TO FORWARD THIS INFORMATION TO THE APPLICANTS BY EITHER:**

**1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANTS ALONG WITH A NOTICE TO COMPLY or,**

**2) CALLING APPLICANTS AND FAXING THEM A COPY OF THE PRINTOUT WITH A NOTICE TO COMPLY**

**THIS WILL INSURE THAT THE NEXT SUBMISSION RECEIVED FROM THEM WILL BE ERROR FREE.**

**IF YOU HAVE ANY FURTHER QUESTIONS, PLEASE CALL:**

**MARK SPENCER 703-308-4212**

# Raw Sequence Listing Error Summary

## ERROR DETECTED SUGGESTED CORRECTION

SERIAL NUMBER: 09/189,415

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 \_\_\_\_\_ Wrapped Nucleics      The number/text at the end of each line "wrapped" down to the next line.  
This may occur if your file was retrieved in a word processor after creating it.  
Please adjust your right margin to .3, as this will prevent "wrapping".
- 2 \_\_\_\_\_ Wrapped Aminos      The amino acid number/text at the end of each line "wrapped " down to the next line.  
This may occur if your file was retrieved in a word processor after creating it.  
Please adjust your right margin to .3, as this will prevent "wrapping".
- 3 \_\_\_\_\_ Incorrect Line Length      The rules require that a line not exceed 72 characters in length. This includes spaces.
- 4 \_\_\_\_\_ Misaligned Amino Acid      The numbering under each 5th amino acid is misaligned. This may be caused by the use of tabs  
Numbering      between the numbering. It is recommended to delete any tabs and use spacing between the numbers.
- 5 \_\_\_\_\_ Non-ASCII      This file was not saved in ASCII (DOS) text, as required by the Sequence Rules.  
Please ensure your subsequent submission is saved in ASCII text so that it can be processed.
- 6 \_\_\_\_\_ Variable Length      Sequence(s) \_\_\_\_\_ contain n's or Xaa's which represented more than one residue.  
As per the rules, each n or Xaa can only represent a single residue.  
Please present the maximum number of each residue having variable length and  
indicate in the (ix) feature section that some may be missing.
- 7 \_\_\_\_\_ PatentIn ver. 2.0 "bug"      A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid  
sequence(s) \_\_\_\_\_. Normally, PatentIn would automatically generate this section from the  
previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section  
to the subsequent amino acid sequence.
- 8 \_\_\_\_\_ Skipped Sequences      Sequence(s) \_\_\_\_\_ missing. If intentional, please use the following format for each skipped sequence:  
(OLD RULES)      (2) INFORMATION FOR SEQ ID NO:X:  
                                 (i) SEQUENCE CHARACTERISTICS:(Do not insert any headings under "SEQUENCE CHARACTERISTICS")  
                                 (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X:  
                                 This sequence is Intentionally skipped  
  
Please also adjust the "(iii) NUMBER OF SEQUENCES:" response to include the skipped sequence(s).
- 9 \_\_\_\_\_ Skipped Sequences      Sequence(s) \_\_\_\_\_ missing. If intentional, please use the following format for each skipped sequence.  
(NEW RULES)      <210> sequence id number  
                                 <400> sequence id number  
                                 000
- 10 \_\_\_\_\_ Use of n's or Xaa's      Use of n's and/or Xaa's have been detected in the Sequence Listing.  
(NEW RULES)      Use of <220> to <223> is MANDATORY if n's or Xaa's are present.  
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 11 \_\_\_\_\_ Use of <213>Organism      Sequence(s) \_\_\_\_\_ are missing this mandatory field or its response.  
(NEW RULES)
- 12 \_\_\_\_\_ Use of <220>Feature      Sequence(s) \_\_\_\_\_ are missing the <220>Feature and associated headings.  
(NEW RULES)      Use of <220> to <223> is MANDATORY if <213>ORGANISM is "Artificial" or "Unknown"  
Please explain source of genetic material in <220> to <223> section.  
(See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32)      (Sec. 1.823 of new Rules)
- 13 \_\_\_\_\_ PatentIn ver. 2.0 "bug"      Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted  
file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing).  
Instead, please use "File Manager" or any other means to copy file to floppy disk.  
AKS-Biotechnology Systems Branch- 5/15/99

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MAY 21 2003  
FBI - NEW YORK  
101-100000000

V. Ryan

1641

PAGE: 1

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/189,415

DATE: 03/10/2000  
TIME: 15:42:36

Input Set: I189415.RAW

This Raw Listing contains the General Information  
Section and up to first 5 pages.

Does Not Comply  
Corrected Diskette Needed

P. 2

1 <110> APPLICANT: Finlay, Brett B  
2 Kenny, Brendan  
3 DeVinney, Rebekah  
4 Stein, Markus  
5 <120> TITLE OF INVENTION: HOST RECEPTOR FOR PATHOGENIC BACTERIA  
6 <130> FILE REFERENCE: 07422/013001  
7 <140> CURRENT APPLICATION NUMBER: US/09/189,415  
8 <141> CURRENT FILING DATE: 1998-11-10  
9 <150> EARLIER APPLICATION NUMBER: 60/065,130  
10 <151> EARLIER FILING DATE: 1997-11-12  
11 <160> NUMBER OF SEQ ID NOS: 9  
12 <170> SOFTWARE: PatentIn Ver. 2.0  
13 <210> SEQ ID NO 1  
14 <211> LENGTH: 1920  
15 <212> TYPE: DNA  
16 <213> ORGANISM: Escherichia coli  
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20 cctgcgcgcg cactaccttc acaaacagac ggcgcgggcac ggggaggaac tggatcatcta 180  
21 attagctcta caggagcatt aggatctcgt tcattgtttt ctcccttgag aaattctatg 240  
22 gctgattctg tcgattccag agatattcca ggacttecta caaaccatc gaggcttgct 300  
23 gcagctacat ctgagacatg cttgcttgga ggatttgaag ttctccatga taaggggcca 360  
24 cttgatattc tcaatacgca aattggaccc tctgcatttc gtgttgaagt gcaggcagat 420  
25 ggtactcatg ccgctattgg agaaaaaaat ggtttggagg ttagcgttac attaatgcct 480  
26 caagaatgga gcagcttgca atctattgat actgagggtg aaaacagatt tgtttttacc 540  
27 gggggacgtg gcggtagtgg gcatccgatg gtcactgtcg catcagatat cgcggaagct 600  
28 cgtacgaaaa tactggccaa attagaccca gacaatcatg gaggacgtca acccaaggac 660  
29 gttgatacgc gttctgttgg tgttggcagc gcttcgggaa tagatgatgg cgttggttagc 720  
30 gaaaccata cttcaacaac aaattccagc gttcgctcag atcctaaatt ctgggtttct 780  
31 gtccggcgaa ttgctgctgg tttagcggga ctggcgga caaggtattgc acaggcggtg 840  
32 gctttgacac cggaaccgga tgatcctaca accaccgatc ctgatcaggc cgcaaatgct 900  
33 gcagaaagtg caacaaaaga tcagttaacg caagaagcat tcaagaacct tgagaaccag 960  
34 aaagttaaca tcgatgcgaa cggaaatgct attccgtctg gggaattaaa agatgatatt 1020  
35 gttgagcaaa tagcacaaca agctaaagag gctggtgagg tggccagaca gcaggctgtt 1080  
36 gaaagcaatg cacaggcgca gcagcgatat gaggatcagc atgccagacg tcaggaggaa 1140  
37 ttacagcttt catcgggtat tggttacggc ctacgagtg cattgattgt tgctggggga 1200  
38 attggtgctg gtgtaacgac tgcgctccat agacgaaatc agccggcaga acagacaact 1260  
39 actacaacaa cacatacggg agtgacgcaa cacagcggag ggatacccca gcacaagggtg 1320  
40 gcaactgatg cacaagagcg aagacgcttc tctgatagac gtgattcgca ggggagtggt 1380  
41 gcacgcacac actggtcaga ttccctagc gaagtgggta atccatatgc tgaagttggg 1440  
42 ggggctcgga atagtcatac ggctcatcag ccagaagagc atatttatga tgaggctcgt 1500  
43 gcagatcctg gttatagcgt tattcagaat ttttcaggga gcggcccagt taccggaagg 1560  
44 ttaataggaa ctccagggca aggtatccaa agtacttatg cgcttctggc aaacagcggc 1620



PAGE: 2

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/189,415

DATE: 03/10/2000  
TIME: 15:42:36

Input Set: I189415.RAW

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47      tgaggttggg gtgggggtggg ggggcgtttt actagcgta atgtttcaga gaacaacgtt 1800
48      gcagcatggg taactcttga acttctgtta ttataatcaa ttaagagaaa ttataatgtc 1860
49      atcaagatat gaacttttat tagatagggt tgcggaaaaa attggtgttg gatctatttc 1920
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51      <211> LENGTH: 549
52      <212> TYPE: PRT
53      <213> ORGANISM: Escherichia coli
54      <400> SEQUENCE: 2
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58      20          25          30
59      Gly Thr Gly His Leu Ile Ser Ser Thr Gly Ala Leu Gly Ser Arg Ser
60      35          40          45
61      Leu Phe Ser Pro Leu Arg Asn Ser Met Ala Asp Ser Val Asp Ser Arg
62      50          55          60
63      Asp Ile Pro Gly Leu Pro Thr Asn Pro Ser Arg Leu Ala Ala Ala Thr
64      65          70          75          80
65      Ser Glu Thr Cys Leu Gly Gly Phe Glu Val Leu His Asp Lys Gly
66      85          90          95
67      Pro Leu Asp Ile Leu Asn Thr Gln Ile Gly Pro Ser Ala Phe Arg Val
68      100         105         110
69      Glu Val Gln Ala Asp Gly Thr His Ala Ala Ile Gly Glu Lys Asn Gly
70      115         120         125
71      Leu Glu Val Ser Val Thr Leu Ser Pro Gln Glu Trp Ser Ser Leu Gln
72      130         135         140
73      Ser Ile Asp Thr Glu Gly Lys Asn Arg Phe Val Phe Thr Gly Gly Arg
74      145         150         155         160
75      Gly Gly Ser Gly His Pro Met Val Thr Val Ala Ser Asp Ile Ala Glu
76      165         170         175
77      Ala Arg Thr Arg Ile Leu Ala Lys Leu Asp Pro Asp Asn His Gly Gly
78      180         185         190
79      Arg Gln Pro Lys Asp Val Asp Thr Arg Ser Val Gly Val Gly Ser Ala
80      195         200         205
81      Ser Gly Ile Asp Asp Gly Val Val Ser Glu Thr His Thr Ser Thr Thr
82      210         215         220
83      Asn Ser Ser Val Arg Ser Asp Pro Lys Phe Trp Val Ser Val Gly Ala
84      225         230         235         240
85      Ile Ala Ala Gly Leu Ala Gly Leu Ala Ala Thr Gly Ile Ala Gln Ala
86      245         250         255
87      Leu Ala Leu Thr Pro Glu Pro Asp Asp Pro Thr Thr Thr Asp Pro Asp
88      260         265         270
89      Gln Ala Ala Asn Ala Ala Glu Ser Ala Thr Lys Asp Gln Leu Thr Gln
90      275         280         285
91      Glu Ala Phe Lys Asn Pro Glu Asn Gln Lys Val Asn Ile Asp Ala Asn
92      290         295         300
93      Gly Asn Ala Ile Pro Ser Gly Glu Leu Xaa Asp Asp Ile Val Glu Gln
94      305         310         315         320

```

W--&gt;

all item 10  
on Ena summary  
sheet

PAGE: 3

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/189,415

DATE: 03/10/2000  
TIME: 15:42:36

Input Set: I189415.RAW

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96 325 330 335  
97 Val Glu Ser Asn Ala Gln Ala Gln Gln Arg Tyr Glu Asp Gln His Ala  
98 340 345 350  
99 Arg Arg Gln Glu Glu Leu Gln Leu Ser Ser Gly Ile Gly Tyr Gly Leu  
100 355 360 365  
101 Ser Ser Ala Leu Ile Val Ala Gly Gly Ile Gly Ala Gly Val Thr Thr  
102 370 375 380  
103 Ala Leu His Arg Arg Asn Gln Pro Ala Glu Gln Thr Thr Thr Thr  
104 385 390 395 400  
105 Thr His Thr Val Val Gln Gln Gln Thr Gly Gly Ile Pro Gln His Lys  
106 405 410 415  
107 Val Ala Leu Met Pro Gln Glu Arg Arg Phe Ser Asp Arg Arg Asp  
108 420 425 430  
109 Ser Gln Gly Ser Val Ala Ser Thr His Trp Ser Asp Ser Ser Ser Glu  
110 435 440 445  
111 Val Val Asn Pro Tyr Ala Glu Val Gly Gly Ala Arg Asn Ser Leu Ser  
112 450 455 460  
113 Ala His Gln Pro Glu Glu His Ile Tyr Asp Glu Val Ala Ala Asp Pro  
114 465 470 475 480  
115 Gly Tyr Ser Val Ile Gln Asn Phe Ser Gly Ser Gly Pro Val Thr Gly  
116 485 490 495  
117 Arg Leu Ile Gly Thr Pro Gly Gln Gly Ile Gln Ser Thr Tyr Ala Leu  
118 500 505 510  
119 Leu Ala Asn Ser Gly Gly Leu Arg Leu Gly Met Gly Gly Leu Thr Ser  
120 515 520 525  
121 Gly Gly Glu Thr Ala Val Ser Ser Val Asn Ala Ala Pro Thr Pro Gly  
122 530 535 540  
123 Pro Val Arg Phe Val  
124 545

&lt;210&gt; SEQ ID NO 3

&lt;211&gt; LENGTH: 1723

&lt;212&gt; TYPE: DNA

&lt;213&gt; ORGANISM: Escherichia coli

&lt;400&gt; SEQUENCE: 3

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132 ccgttgggat ctcgtagcgt atttacgcct gtaaggaatt ctatggctga ttctggcgac 180  
133 aatcgtgcca gtgatgttcc tggacttcc gtaaataccga tgcgcctggc ggcgtctgag 240  
134 ataacactga atgatggatt tgaagttcct catgatcatg gtccgctcga tactcttaac 300  
135 aggcagattg gctcttcggt atttcgagtt gaaactcagg aagatggtaa acatattgct 360  
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137 ttgcagtcca ttgatcctga aggtaaagac aaatttgat ttactggagg ccgtgggtgt 480  
138 gctgggcatg ctatggtcac cgttgcttca gatatacagg aagcccgcca aaggatactg 540  
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144 gatcagttaa cgaaagaagc gttccagaac ccagataatc aaaaagttaa tatcgatgag 900

PAGE: 4

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/189,415

DATE: 03/10/2000  
TIME: 15:42:36

Input Set: I189415.RAW

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&lt;210&gt; SEQ ID NO 4

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&lt;213&gt; ORGANISM: Escherichia coli

&lt;400&gt; SEQUENCE: 4

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168      Gly Gln Leu Ile Asn Ser Thr Gly Pro Leu Gly Ser Arg Ala Leu Phe
169      35          40          45
170      Thr Pro Val Arg Asn Ser Met Ala Asp Ser Gly Asp Asn Arg Ala Ser
171      50          55          60
172      Asp Val Pro Gly Leu Pro Val Asn Pro Met Arg Leu Ala Ala Ser Glu
173      65          70          75          80
174      Ile Thr Leu Asn Asp Gly Phe Glu Val Leu His Asp His Gly Pro Leu
175      85          90          95
176      Asp Thr Leu Asn Arg Gln Ile Gly Ser Ser Val Phe Arg Val Glu Thr
177      100         105         110
178      Gln Glu Asp Gly Lys His Ile Ala Val Gly Gln Arg Asn Gly Val Glu
179      115         120         125
180      Thr Ser Val Val Leu Ser Asp Gln Glu Tyr Ala Arg Leu Gln Ser Ile
181      130         135         140
182      Asp Pro Glu Gly Lys Asp Lys Phe Val Phe Thr Gly Gly Arg Gly Gly
183      145         150         155         160
184      Ala Gly His Ala Met Val Thr Val Ala Ser Asp Ile Thr Glu Ala Arg
185      165         170         175
186      Gln Arg Ile Leu Glu Leu Leu Glu Pro Lys Gly Thr Gly Glu Ser Lys
187      180         185         190
188      Gly Ala Gly Glu Ser Lys Gly Val Gly Glu Leu Arg Glu Ser Asn Ser
189      195         200         205
190      Gly Ala Glu Asn Thr Thr Glu Thr Gln Thr Ser Thr Ser Thr Ser Ser
191      210         215         220
192      Leu Arg Ser Asp Pro Lys Leu Trp Leu Ala Leu Gly Thr Val Ala Thr
193      225         230         235         240
194      Gly Leu Ile Gly Leu Ala Ala Thr Gly Ile Val Gln Ala Leu Ala Leu

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RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/189,415

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Input Set: I189415.RAW

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195                               245                               250                               255
196 Thr Pro Glu Pro Asp Ser Pro Thr Thr Thr Asp Pro Asp Ala Ala Ala
197                               260                               265                               270
198 Ser Ala Thr Glu Thr Ala Thr Arg Asp Gln Leu Thr Lys Glu Ala Phe
199                               275                               280                               285
200 Gln Asn Pro Asp Asn Gln Lys Val Asn Ile Asp Glu Leu Gly Asn Ala
201                               290                               295                               300
202 Ile Pro Ser Gly Val Leu Lys Asp Asp Val Val Ala Asn Ile Glu Glu
203                               305                               310                               315                               320
204 Gln Ala Lys Ala Ala Gly Glu Glu Ala Lys Gln Gln Ala Ile Glu Asn
205                               325                               330                               335
206 Asn Ala Gln Ala Gln Lys Lys Tyr Asp Glu Gln Gln Ala Lys Arg Gln
207                               340                               345                               350
208 Glu Glu Leu Lys Val Ser Ser Gly Ala Gly Tyr Gly Leu Ser Gly Ala
209                               355                               360                               365
210 Leu Ile Leu Gly Gly Gly Ile Gly Val Ala Val Thr Ala Ala Leu His
211                               370                               375                               380
212 Arg Lys Asn Gln Pro Val Glu Gln Thr Thr Thr Thr Thr Thr Thr
213                               385                               390                               395                               400
214 Thr Thr Thr Ser Ala Arg Thr Val Glu Asn Lys Pro Ala Asn Asn Thr
215                               405                               410                               415
216 Pro Ala Gln Gly Asn Val Asp Thr Pro Gly Ser Glu Asp Thr Met Glu
217                               420                               425                               430
218 Ser Arg Arg Ser Ser Met Ala Ser Thr Ser Ser Thr Phe Phe Asp Thr
219                               435                               440                               445
220 Ser Ser Ile Gly Gly Pro Cys Arg Ile Arg Met Leu Met Leu Lys His
221                               450                               455                               460
222 Arg Cys Met Ile Arg Arg Cys Arg Leu Leu Ile Leu Ile Arg Leu Phe
223                               465                               470                               475                               480
224 Arg Ile Trp Gly Ile Gln Ile Ser Val Val Tyr Ser Thr Ile Gln His
225                               485                               490                               495
226 Pro Pro Arg Asp Thr Thr Asp Asn Gly Ala Arg Leu Leu Gly Asn Pro
227                               500                               505                               510
228 Ser Ala Gly Ile Gln Ser Thr Tyr Ala Arg Leu Ala Leu Ser Gly Gly
229                               515                               520                               525
230 Leu Arg His Asp Met Gly Gly Leu Thr Gly Gly Ser Asn Ser Ala Val
231                               530                               535                               540
232 Asn Thr Ser Asn Asn Pro Pro Ala Pro Gly Ser His Arg Phe Val
233                               545                               550                               555
234 <210> SEQ ID NO 5
235 <211> LENGTH: 1460
236 <212> TYPE: DNA
237 <213> ORGANISM: Escherichia coli
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240 ccactgcgct ttgctgcgtc cgaggatatct ttgcatggtg cgcttgaagt tcttcatgat 120
241 aaaggggggc ttgatactct taactctgct attggatctt cgttattccg tgttgaaact 180
242 cgggatgatg gcagccatgt tgctatcggg caaaaaaatg gcctcgagac cactgttggt 240
243 ttaagtgagc aagagttttc tagcttacag tcccttgatc ctgaaggtaa aaacaaattt 300
244 gtatttactg gaggccgcgg tggcccaggg catgctatgg tcacggttgc ttcagatatc 360

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VERIFICATION SUMMARY  
PATENT APPLICATION US/09/189,415

DATE: 03/10/2000  
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Input Set: I189415.RAW

Line ? Error/Warning

Original Text

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93 W "N" or "Xaa" used: Feature required

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Gly Asn Ala Ile Pro Ser Gly Glu Leu Xaa A